

October 31, 2003

Mr. Steve Hill
Air Pollution Control Officer
Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109

**RE: EPA Review of Proposed Refinery Title V/ Major Facility Review Permits:
Conoco-Phillips Company (Rodeo) source # A0016, and
Shell Martinez Refinery (Martinez) source # A0011**

Dear Mr. Hill:

Thank you for the opportunity to comment on two proposed Bay Area Air Quality Management District ("BAAQMD" or "District") Title V Major Facility Review permits ("Title V permits"). We are submitting these comments now because we did not have enough time to review these two permits during the short EPA 45-day review period that ended on September 26, 2003 for all five proposed District refinery permits. We understand that the District will revise each proposed refinery permit as necessary to respond to the General Comments in our September 26, 2003 letter on the other three proposed refinery permits and we did not repeat those comments in today's letter.

We appreciate the District's willingness to review these comments prior to issuing the initial Title V permits for Conoco-Phillips and Shell Martinez. We recommend that the District include as many of the changes we are requesting as possible in the initial Title V permits, and make the rest of the recommended changes as soon as possible. As you know, EPA retains the authority to reopen any Title V permit if necessary to assure compliance with all applicable requirements and the requirements of 40 CFR part 70.

We appreciate the District's cooperation during this process. We understand that the District intends to proposed additional refinery Title V permit revisions in the near future, and we will continue to work cooperatively with the District during these revisions. If you have any questions concerning our comments, please contact me at (415) 972-3974, or contact Ed Pike of my staff at (415) 972-3970.

Sincerely,

Original signed by

Gerardo C. Rios
Chief, Air Permits Office

Adams, Broadwell, Joseph & Cardozo - Daniel Cardozo, et. al.
California Air Resources Board - Mike Tollstrup
Communities for a Better Environment - Will Rostov
Conoco-Phillips Company - Willie W. C. Chiang
Golden Gate University - Marcie Keever, et al
Shell Martinez Refinery - Aamir Farid

Enclosure A
EPA Comments on Conoco Phillips Refinery Permit

STATUS OF EPA REVIEW

EPA is providing comments now based on our limited review of the proposed permit so that the District will have time to review our comments prior to issuing the initial Title V permit. We will inform you if we have any additional comments in the future.

Our September 26, 2003 letter contains several general issues that are potentially applicable to all five proposed refinery permits including this proposed permit. Please note that today's comments are not intended to replace or repeat those comments.

ABATEMENT DEVICES

Monitoring

1. For abatement devices A-20 and A-21, the limits for differential pressure are specified as the "normal range" (Table IIB, page 19). Because the permit does not state what the "normal range" for the differential pressure is, these limits do not establish clear requirements for the source. EPA strongly recommends that these generic limits be replaced by the specific numerical values that constitute the allowable range of differential pressures.
2. The only monitoring included in the permit for sources 380 and 389 is measurement of the differential pressure across the sources' abatement devices. EPA recommends adding additional requirements for visual inspections on an event basis whenever visible emissions are seen exiting the silos.

COMBUSTION UNITS

Applicable Requirements

1. The note regarding Condition 1694 says that the original version of Part 5 of the condition was deleted because fuel oil is not burned at the facility and the condition is not needed. According to Condition A.2b, however, sources 3 and 7 are permitted to use liquid fuel. Unless the facility is prohibited from firing fuel oil, the original fuel oil conditions and the necessary monitoring requirements should remain in the permit.
2. According to Part B1 of Condition 476, the charging rate for source 300 has a daily limit of 56,000 barrels and an annualized daily limit of 52,000 barrels. Only the 56,000 barrel limit is listed in Table IIA on page 10 of the permit. This table should be revised to also include the annualized daily limit.

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3. BAAQMD Regulation 9-3-303 was potentially omitted from the permit for sources 8 and 14. The District should review the applicability of this requirement for these units and revise the permit as appropriate.
4. Condition #1694, Part A.2b requires that sources 3 and 7 be monitored for visible emissions during tube cleaning (page 255). This applicable requirement was not included in Tables VII - A.2 and VII - A.5 and should be added.
5. Condition # 1694, Part A.2c requires that sources 3 and 7 be monitored for visible emissions before each 1 million gallons of liquid fuel is combusted at each source. The condition also requires a Method 9 evaluation if visible emissions are present. These requirements were not included in Tables VII - A.2 and VII - A.5 and should be added.

Federal Enforceability

Throughput Limits established in permit condition 1694:

In this permit, the District has proposed to change the designation for fuel limits that apply to most combustion sources from federally enforceable to not federally enforceable (for example, see Condition 1694 in Table IV - A.2 for source S-3; similar conditions exist for sources S-4 up to S-31 and all of the combustion units other than gas turbines and duct burners). The throughput limits in condition 1694 were established in a prior permitting action, although the permit and the Statement of Basis do not appear to discuss the type of permit nor the reason for marking them non-federally enforceable. Limits created through prior NSR permits are federally enforceable Title V permit requirements. Please see the enclosed March 31, 1999 letter from John Seitz, Director of EPA's Office of Air Quality Planning and Standards, to Doug Allard, CAPCOA President.

In addition, the throughput for S-10 in condition 1694 was increased from 184 to 223 mmbtu/hr without an explanation. The District should retain the 184 mmbtu/hr limit or justify the change.

Monitoring

The BAAQMD Continuous Emission Monitoring Policy and Procedures manual is designated as non-federally enforceable throughout the permit (for example, see Table IV - A.6 for source S-8 on page 43). This manual was approved into the SIP on 05/03/1984 and is therefore a federally enforceable requirement. The District should revise the permit accordingly.

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COOLING TOWERS

Applicable Requirements

It appears that the cooling towers and all of their applicable requirements were omitted from the draft permit (except for BAAQMD Regulation 11, Rule 10 on page 24). The cooling towers listed in the cooling tower calculations (and any additional towers not included in the calculations) should be incorporated into the permit.

Miscellaneous

Several sources are included in the cooling tower calculations but are listed in the permit as units other than cooling towers. For each of the following, the District should revise the permit and/or the calculations to reflect the true nature of the sources:

- a. Source 110 - listed in the permit as tank 155 (see permit pages 9, 196, 197, 198 for example).
- b. Source 228 - listed in the permit as tank 750. In addition, the statement of basis notes that this unit has been removed from service. If this is the case, the permit should be updated to reflect the change.
- c. Source 230 - listed in the permit as tank 752. In addition, the statement of basis notes that this unit has been removed from service. If this is the case, the permit should be updated to reflect the change.
- d. Source 236 - listed in the permit as tank 770 (see permit pages 22, 246, and 408).
- e. Source 238 - listed in the permit as Used Caustic Tank T-211 (see permit pages 9, 164, 294, and 374).
- f. Source 240 - listed in the permit as tank 774. In addition, the Statement Of Basis notes that this unit has been removed from service. If this is the case, the permit should be updated to reflect the change.

FUGITIVE SOURCES (PRESSURE RELIEF VALVES, PUMPS, COMPRESSORS)

Applicable Requirements

1. Table IV - AA indicates that 40 CFR 61 Subpart V is neither applicable on a refinery-wide basis nor to any of the sources that are individually listed and it is unclear in the permit why. The standard would apply to any piece of equipment that contains or contacts a fluid (liquid or gas) that is at least 10 percent by weight a volatile hazardous air pollutant (VHAP), such as benzene, unless the facility has demonstrated that the standard doesn't apply under 61.285(d). The District should re-

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evaluate the applicability of this subpart with respect to the fugitive emission sources at the refinery and include all appropriate applicable requirements. If the refinery or any sources are not subject to the subpart, a justification should be provided in the statement of basis.

2. Table IV-AB shows that NSPS Subpart QQQ is applicable to source 1007 (page 145). As a result this source should also be added to table IV-AA.
3. According to Table IV-B5, source 388 is subject to Part 3 of Condition 1860, which requires that the source be included in the fugitive emission monitoring program required by Regulation 8-18. This source and condition are not included in Table IV-AA and should be added.
4. Table IV-AA indicates that source 324 is subject to the requirements of 40 CFR 60 Subpart QQQ (page 142). This source should be specifically listed in Table IV-AB as a unit that is subject to Subpart QQQ along with source 1007 on page 145.
5. Table IV-AB is missing applicable requirements from 40 CFR 60 Subpart VV. The following should be added to the permit:
 - 60.482-2(c) - Pump leak repair period
 - 60.482-7(d) - Valve leak repair period
6. Table IV-AB is missing an applicable requirements from 40 CFR 63 Subpart CC. The following should be added to the permit:
 - 63.648(d) - New sources

Federal Enforceability

The 11/27/02 amendment to BAAQMD Regulation 8-18 has been approved in the SIP. Therefore, requirements 8-18-405 and 8-18-406 should be denoted as federally enforceable in Table IV-AB on page 143 of the permit. Upon doing so, the District should also delete the redundant requirements for SIP Regulation 8-18 from the same page.

Monitoring

We understand that the District will require the refineries to demonstrate compliance with SIP Regulation 8-10 by monitoring the pressure of all of the pressure vessels.

Miscellaneous

The adoption date for SIP 8-28 was misprinted in Table IV-AB on page 144. The date should be changed from 12/9/94 to 6/01/94.

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HYDROGEN PLANT

Monitoring

Pursuant to BAAQMD Condition 6671 and Regulation 8-2-301, source 307 has a vent scrubber (A-50) to meet a 15 lb/day POC limit from emission streams with more than 300 ppm total carbon. EPA agrees that the rule limits are necessary for hydrogen plants at each of the refineries because hydrogen plant vents (presumably CO₂ vents) can emit over 15 lbs/day. We also believe that parameter monitoring to ensure proper operation of the control device is necessary and that testing will be necessary if the facility is not well under its emission limits (see Table VII-N, which only requirements for visual inspection). We also believe that Reg 8-2 and monitoring requirements should apply to the CO₂ vent at the hydrogen plant for each refinery.

LOADING RACKS

Monitoring

1. According to Table II B, the marine terminal thermal oxidizer must meet either of two limits:
 - 1) 2 pounds POC per 1,000 barrels loaded; or
 - 2) achieve a reduction of POC emissions of at least 95% by weight.

To demonstrate compliance with the above limits, Table VII - S (page 347) requires continuous monitoring of the device's temperature. EPA recommends adding a requirement for an appropriate residence time (with a gas flow meter as a monitoring method for the flow rate) to help ensure that the oxidizer meets the required control efficiency.

PERMIT SHIELDS

Applicable Requirements

The proposed permit contains a "subsumed requirements" permit shield from the floating roof tank requirements based on a request from Unocal in 1987 for alternate NSPS QQQ conditions. We were not able to locate an EPA approval document in the limited amount of time available to review this permit. Please remove the shield or provide us with a copy of the EPA approval document or the date and name of person who approved it.

TANKS

Applicable Requirements

For sources subject to NSPS Subpart Kb, the frequency specified for inspections of the secondary rim seal is not consistent with the regulations. The permits require inspections for holes or tears of the secondary rim seal at a frequency of once every ten years. However,

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pursuant to 60.113b(a)(2), the secondary seal should be inspected for holes, tears, or detachment on an annual basis. For example, see Table VII-B9 for source 448 in the permit.

Monitoring

1. The frequency specified for multiple tank monitoring requirements in the permit is “not specified.” In cases where the monitoring frequencies are not specified in the applicable requirements, the District should use its periodic monitoring authority to establish appropriate ones. Occurrences of the unspecified monitoring frequency were noted in tables VII - B11, VII - B12, VII - B15, and VII - B25. Also note that the unspecified frequency occurs in Table VII - Cluster 11 in the Tesoro permit and Table VII.F.1.7 in the Chevron permit.
2. For tanks that are exempt from Regulation 8-5 based on low vapor pressure, the District requires monitoring of the vapor pressure only when there is a change in the material that is stored (see monitoring requirements for source 118 in Table VII-B2 for example). In such cases, the District should establish what conditions or circumstances constitute a “material change.” For example, crude oil that comes from one location can have a different vapor pressure than oil that comes from a different source. Without a clear definition of a “material change,” the facilities may not consider such an event to be cause for a vapor pressure determination. In addition, for these sources, the District should require that the facilities maintain records of the tank contents.

GENERAL COMMENTS (UNSPECIFIED UNITS AND STATEMENT OF BASIS)

Unspecified Units

Applicable Requirements

1. Regulation 9-1-313.2 is marked non-federally enforceable in several instances throughout the permit. This regulation is in the SIP and should be denoted federally enforceable in the permit.

Statement of Basis

Miscellaneous

1. The statement of basis says that permits may be revised through a variance or an administrative change (page 12, electronic version). Please add to this discussion a clarification that any permit revisions made through a variance must go through the appropriate review process.
2. Section G of the statement of basis contains a brief summary of the changes made to the permit based on comments received by the District. The general response to comments document does not contain this type of summary, and we encourage

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the District to include this type of summary in the statement of basis or final response to comments for all five of the refinery permits.

Enclosure B
EPA Comments on Proposed Shell Martinez Refinery Permit

STATUS OF EPA REVIEW

EPA is providing comments based on our limited review of the proposed permit so that the District will have time to review our comments prior to issuing the initial Title V permit. We will inform you if we have any additional comments in the future.

Please note that these comments are in addition to any relevant issues in our September 26, 2003 letter that may also apply to this refinery.

ABATEMENT DEVICES (Table II B)

Monitoring

1. As noted in our comments for the proposed Tesoro permit (EPA letter to BAAQMD, September 26, 2003, Enclosure B, p.1), it is currently unclear what monitoring is required to ensure that the abatement devices in Table IIB meet their emission limits because the table in the proposed permit does not contain this information. For abatement devices subject to monitoring (e.g., baghouse monitoring) all of the applicable requirements should be included in the table. In addition to making the monitoring requirements clearer, this revision will also make Shell's draft permit more consistent with the draft permits for the other refineries (see Table IIB in Chevron's draft permit).
2. There are several instances where a control device is subject to an abatement efficiency, but the District has not included any monitoring to determine compliance with that efficiency (see below). In many cases, the type of control device is not specified. For instance, tank 532 is controlled by A56, a vapor recovery system. Without knowing what type of vapor recovery system this device is, we cannot suggest appropriate monitoring. Please specify the control(s) in the permit and include monitoring methods for all limits, or justify why monitoring is not needed.
 - A. Abatement device A-33 is required to meet a 95% abatement efficiency (table IIB, page 28). Please specify the type of "vapor recovery system" and add a monitoring method to table VII to determine compliance. For instance, if the unit has a condenser or adsorber, then source testing and parameter monitoring would be appropriate.
 - B. Flares S-1470 (Table II B, p.31) and S-4201 (Table II B, p.38) have destruction efficiency requirements of 98.5%. Please add monitoring methods to table VII for each of these units to determine compliance with these limits and evaluate in the

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statement of basis whether the controls in the proposed permit will assure compliance with the associated limit.

C. Thermal oxidizers A-100 (Table II B, p.29) and A-4181 for the marine loading berths are subject to a 95% control efficiency. (See also p.310 condition #4288 for sources 2001, 2002, 2003, and 2004 - marine loading berths). Table VII-BR (p. 490) has only P/E recordkeeping as the method to verify compliance. Please add an appropriate method for monitoring this limit. For thermal oxidizers, we recommend temperature monitors, residence time monitors, and source tests.

D. Tanks S532 on p.428; S13, S1114, S1115, and S4334 on p.438; S1469 on p.458; Tanks S2007, S2008, S5115, and S5116 on p. 491; and Tanks S4319, S4350, S4356 on p.517 have a 95% control requirement but no monitoring for compliance. Tanks S4319, S4350, and S4356 on p. 516 have a 90% control requirement but no monitoring for compliance. Please state the controls that will be used to meet this requirement and add appropriate monitoring to table VII:

S532: Control device A56 is a vapor recovery system. The citation to the control efficiency limit is NESHAP Subpart FF 63.649(a)(2)(ii). This appears to be an incorrect citation since this regulation has to do with equipment leaks and does not mention control efficiency for a vapor recovery system. Because this citation is incorrect, we cannot suggest monitoring appropriate to assure compliance with the governing regulation. Please correct the citation and add monitoring to table VII-L (p. 428).

S13, 1114, 1115: To verify compliance with 60.112b(a)(3)(ii), 95% control efficiency, the abatement devices controlling these sources must comply with 40 CFR, 60.113b(c). Please add citations to this regulation. In accordance with 60.113b(c)(ii), please include a description of the parameters that will be monitored (and a monitoring method) to ensure that the control device will be operated in conformance with its design.

S1469: See comment on S532 above on citation to 63.649(a)(2)(ii).

Federal Enforceability

Table IV-BO, S1598, page 208: Please add rules 8-7-301.8 through 8-7-301.12, and rules 8-7-302.6 through 8-7-302.13 to the SIP version of rules 8-7-301 and 8-7-302, as is done for the District version.

Miscellaneous

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We recommend that the permit require the facility to use compressors to avoid routine releases to those flares (S4201, A-101, A-102, and A-103) designated as emergency–use only to ensure compliance with the exemption from the NSPS J fuel H₂S limit. See related Tesoro comment (EPA letter to BAAQMD, September 26, 2003, Enclosure B, p.1).

CATALYTIC CRACKING UNIT

Applicable Requirements

1. The permit should clarify that the NSPS PM limit increase is allowed only if the CCU exhaust is passed through an incinerator or boiler in which auxiliary fuel is combusted; the current conditions allow an increased limit with an unclear reference to “auxiliary fuel.” (p.451, table VII-G, S1426.)
2. For source 1426, table IV-AP includes several regulations for emission limits. Please spell out numerical limits for 9-1-310.1, sulfur dioxide limit; 60.102, standard for PM; 60.102(a)(1) and (a)(2); 60.102(b); 60.103, and 60.104(b)(2). All numerical limits should be spelled out in the permit. Where a numerical limit is included in one part of the permit, such as Section VI, but not another, it would be helpful to add cross-referencing.
3. Please include the following requirements for S-1426 or provide a justification in the statement of basis explaining why these requirements are not applicable:
 1. Reporting and recordkeeping requirements under 60.107 (opacity/PM)
 2. 6-305
 3. 6-401
 4. 60.104(b)(3) for units without add-on SO_x controls
 5. 60.106(b)(3), calculation for coke burn-off rate
 6. 60.107 for CO requirements

Monitoring

1. Please add periodic monitoring for proper ESP operation. Examples of monitoring approved by EPA in the past include (but are not necessarily limited to) parameter monitoring based on specified ranges for the voltage and current, periodic stack tests, and COMs. For additional discussion, please see the section on electrostatic precipitators on page 8 of this enclosure, and pages 2-3 of the Tesoro comments, submitted to the District on September 26, 2003.
2. We recommend stating that the records used to ensure compliance with the “daily profile” condition on p.454 for S1426 (table VII-G) will be based on the actual emissions monitored by CEMs where available (also p.471 table VII-AW for S1494,

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etc; p.481 for flexicoker S1759I; and throughout the permit). We understand that if current data shows that incorrect assumptions were made in originally determining the baseline emissions, or that incorrect emission factors were used for new equipment, then permit revisions outside the scope of this proposed Title V permit may be necessary.

3. For source 1426, table VII-AG (p.452) lists record-keeping as the monitoring for the SO₂ limit pursuant to 60.104(b)(2). NSPS J 60.106(i) outlines the appropriate monitoring to determine compliance with 60.104(b)(2). Please add this monitoring to the permit.

COMBUSTION UNITS

Federal Enforceability

For source 4161 table IV-CU (p. 251): Please include a federally-enforceable requirement to use the SCR at all times. (See permit condition 12271, part 31 from p. 372)

Start-up/Shut-downs (condition 12271, p.369 and p.370)

1. The proposed permit contains start-up and shut-down exemptions that appear excessive for the gas turbines (p.370 section VI condition #12271). Condition 24b states that limits described as offset limits do not apply during days with start-ups or shut-downs, and condition 24c grants an exemption from BACT limits for start-up and shut-down periods that are allowed for up to 24 hours (see condition 22, which allows 24 hours for units with selective catalytic reduction). The proposed permit would not assure compliance with BACT and offset limits because the permit appears to allow the source to continuously avoid them if the refinery cycles the gas turbine on and off each day. We believe that these exemptions are inappropriate and would like to discuss with the District the origin of these exemptions and the best way to correct them. We will be happy to share with the District examples of appropriate start-up and shut-down conditions from other gas-turbine permits if you would find them helpful.

In addition, the proposed permit would exempt other combustion units from BACT for eight hours if they do not have SCR and 24 hours if they do have SCR (see also conditions 29, 30, 35, 36, 40, 41, 42) during start-ups and shut-downs. These exemptions also seem excessive unless there is a specific reason why a unit would need a long start-up or shut-down period without using emission controls.

2. In addition, conditions from the prior permit are phrased to apply to the entire permit (i.e. Title V permit), while they originally would apply only to permit condition

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#12271, which states the exemption. Also, the 72-hour exemption should be specifically limited to any individual unit that cannot comply with BACT under the special conditions listed on p.369. It could be interpreted to apply to all of the units, including boilers, heaters, and turbines fired on standard fuels.

Combustion of Fuel Oil

Monitoring

1. The permit allows combustion of fuel oil throughout Table II-A, beginning on p.9. However, p.369 prohibits fuel oil for units S4190-4193. Please change the provision on p.9 to state “low-sulfur diesel” for these units and all others subject to a similar restriction. Fuel oil includes fuels with greater emissions than low-sulfur diesel #2. (We would also find it helpful to list all the ratings rather than cross-referencing a condition with those ratings, or at least listing the page number where they are listed.)
2. For all boilers allowed to burn fuel oil (1507, 1509, 1512, 1514, 4190, 4191, 4192, and 4193) please see comment #1 under Tesoro’s “Combustion Units/Monitoring” (EPA letter to BAAQMD, September 26, 2003, Enclosure B, p.2).
3. Source 1800, table VII-BL, p.484: Please add monitoring for rule 6-301 (Ringelmann #1), or explain in the Statement of Basis why no monitoring is needed.

Fuel limits

The District needs to either 1) change the condition to low-sulfur diesel for all units; or 2) perform a new periodic monitoring evaluation. The District is currently relying on a CAPCOA-CARB-EPA Region IX periodic monitoring agreement developed for sources firing low-sulfur diesel (condition #18618, #3&4 on p. 409), but the permit does not appear to prohibit combustion of fuel oil #6 or other grades of fuel oil. These other fuels typically result in significantly higher PM emissions than the low-sulfur diesel addressed in these agreements (see Air & Waste Management Association Air Pollution Manual pp. 247-8).

CO Boilers

Applicable Requirements

Please explain why Rules 6-304 and 60.104(a)(1) do not apply to the CO boilers.

Monitoring

1. The monitoring frequency for SOx fuel content is listed as one sample per million gallons (p.475 for CO boilers S1507, S1509, and S1512; p. 478 for S1514 utility

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boiler). We believe that the original sampling in the 2002 draft permit of once per batch is appropriate based on the CAPCOA/CARB/EPA Region IX guidelines (page 8) and should not be removed. Please note that this limit is also listed a second time on the table based on BAAQMD Condition #7618, Part E.

2. A sliding-scale test frequency (p. 410) is proposed for the SO₃/H₂SO₄ limit on units S1431, 1432, 1765, 4180, and particulate limits on CO boilers S1507, 1509, 1512, with a frequency once every three years if the source passes the annual test at less than 50% of the limit. Please explain how the district would monitor parameters or otherwise verify that emissions did not increase during the three years without source testing.
3. We understand that the CO boilers may burn up to 28,000 tpy DAF Float; 36,500 tpy Waste Biosolids; and 4,000 gallons per minute of primary treated wastewater (page 7 of CAL EPA DTSC Hazardous Waste Facility Permit dated 12-30-95; attached to Adams & Broadwell's September 2002 comments). Please include these materials in the periodic monitoring evaluation and require additional PM source testing if necessary to accurately quantify the different emission levels that may occur due to the different materials burned in the boilers.

Miscellaneous

Table II-A states that the CO boilers burn only gaseous fuels or oil. This is inconsistent with the DTSC permit referred to above.

COOLING TOWERS

Applicable Requirements

1. Source 4210 is subject to the source-specific applicable requirements on pages 158 (table IV-AS for sources 1457 and 1778) of the permit. This cooling tower should be added to the list of affected sources.
2. Rule 6-311 should be added to the list of source-specific applicable requirements for the cooling towers on page 158 (table IV-AS for sources 1457 and 1778) of the draft permit.

Miscellaneous

The applicable limits and compliance monitoring requirements for source 4210 listed on pages 456 (table VII-AJ) and 512 (table VII CJ) could be consolidated into one table for clarity and conciseness.

EMISSION CAPS

CO Increases

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We would like to note that this permit avoids several concerns that we raised in our September 26, 2003 comment letter regarding the Chevron and Tesoro emission caps. For instance, this permit does not appear to contain problematic language regarding CO increases contained in the Chevron and Tesoro permits. This is consistent with EPA's recommended revisions for those permits and we recommend removing the language from the Chevron and Tesoro permits to be consistent with the proposed Shell permit.

NOx CEMs for Cap Compliance and Compliance with other Limits

We would like to note that the CEMs language on p362-3 (section VI condition #12271) requiring the use of CEMs installed at the source could serve as a good model for Chevron & Tesoro caps. Page 397-8 (section VI condition #18153) specifies extensive use of CEMs for NOx.

NSR Applicability Baselines

We would also like to note that this permit does not appear to contain problematic language regarding NSR applicability baselines contained in the Chevron and Tesoro permits. This is consistent with EPA's recommended revisions for those permits, and we suggest using the proposed Shell permit as a model for making those revisions.

Offset Generation

Consistent with EPA's recommended revisions for the emission cap conditions for Chevron and Tesoro, the cap conditions in the proposed Shell permit clearly state that a source may not bank emissions just by lowering the cap (p. 326, condition 7c). Instead, the permit requires that the source meet the District's NSR rule before banking emissions. We suggest using the proposed Shell permit as a model for revising the other proposed refinery permits.

Partial Emission Cap

Miscellaneous

1. Please explain why fugitives are not included for emission caps, and whether fugitives from new sources are generally included in NSR applicability and offset calculations (p.360 section VI condition #12190; this comment also applies to other caps).
2. We would like to know whether the sanctions in Condition # 7618 B on p.323 are intended to be in addition to, or replace, other enforcement authorities.

Variance Exemptions

The proposed Shell permit allows the exclusion of any emissions for which a variance has been granted (p.361 section VI condition #12271). As discussed for the other Bay Area refinery permits, we understand that the District will delete these provisions or state that they do not affect federal enforceability of the cap. We believe this change is also necessary for the Shell Martinez permit. Variances may not be included in Title V permits as federally enforceable requirements, and are also prohibited from State

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Implementation Plans. For more information, see *Industrial Environmental Association v. Browner*, No. 97-71117 (9th Cir., May 26, 2000) and 62 FR 34641 (June 27, 1997). For instance see: FRN p80278 - middle col. 52.21 definitions 52.21(b)(48)(ii)(a & b).

ELECTROSTATIC PRECIPITATORS

Monitoring

As discussed in our comments for the Tesoro permit (EPA letter to BAAQMD, September 26, 2003, Enclosure B, p.2), the District must require periodic monitoring for the Shell ESP. For example, S-1426 ESP has no monitoring per Table II B. (See also our earlier comment on PM10 testing for the CO boiler emissions routed through the ESP.)

FLARES

Applicable Requirements

1. Condition 18617, #12 (p. 411) implies that “intentional” releases to flares are allowed, in which case NSPS sub-part J applies to all units built after the date listed in the standard and a non-applicability permit shield for these flares cannot be included.
2. When reevaluating and documenting the determinations for NSPS J (as discussed in EPA’s letter to BAAQMD, September 26, 2003, Enclosure A, p.1), please also look at the applicability of NSPS J to thermal oxidizers.
3. Table VII-AO (p. 460) lists P/E record provision pursuant to NSPS J for S1471 and S1472 though there is no emergency only provision in the permit nor any citation to NSPS J for these units. Please explain if these units are subject to NSPS J; if they are subject please specify if they are subject to the fuel limit or exempt based on emergency/process upset use only and add continuous H2S monitoring. If these units are exempt please retain the record keeping provision and provide an explanation in the statement of basis.
4. In addressing the applicability of 40 CFR 60, Subpart A, please explain why these requirements, particularly 60.11, have been deleted from table IV-AXa for S-4201 and abatement devices 101, 102, and 103 (p164-165). Please ensure that all flares and thermal oxidizers subject to 60.11 have this requirement listed in the permit. We would recommend making 60.11 a refinery-wide requirement as was done for the other four Bay Area refinery permits recently submitted for review.
5. Similarly, when the District addresses applicability of 40 CFR 63, Subpart CC, please note that any flare subject to 63.643 must either comply with 63.11(b), or else meet the requirements of 63.643(a)(2), in which case refineries must be capable of measuring the control efficiency of the flare. Please ensure that each flare subject to

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63.11 has this requirement listed in the permit. The District may want to consider making 63.11 a refinery-wide condition as was done in the permits for Chevron, Conoco, and Valero.

6. Table II B (p. 34) says that there are no applicable requirements for flares S-1771 and 1772. However, table IV-BW (p. 213) lists several requirements for these sources. Please correct this discrepancy.
7. Table IV-BXa lists condition 7618 as an applicable requirement for 1771. However, on page 322 (section VI, permit conditions, 7618) 1771 is not one of the subject sources. Instead, source 1772 is listed as subject, while table IV-BW (p.213) does not list 1772 as subject. Please correct the discrepancy.
8. We suggest listing Rule 12-11 as a requirement for all flares. It is currently just listed for S-4201, and A-101, 102, and 103 (Table IV-AXa, p.164).

Monitoring

1. Table VII-AN on page 459 lists continuous monitoring & records as the H2S fuel monitoring requirement for S-1470 pursuant to NSPS J. Please specify continuous H2S analyzer as is done for 1771 and 1772 (table VII-BH, p.482) in the same permit.
2. In the PM source table (p. 58, electronic version, engineering evaluation) the District refers to note 1, explaining why flare S-4201 is not subject to monitoring for District regulation 6-301. However, table VII-AO (p. 459) does list a monitoring requirement for S-4201. Please clarify.

FUGITIVE SOURCES (PRESSURE RELIEF VALVES, PUMPS, COMPRESSORS)

We would recommend following the same format as used for the other four Bay Area Title V refinery permits, including an applicability matrix and a table of all applicable requirements and monitoring for all fugitive sources.

Applicable Requirements

1. Facility-Wide Conditions (p 303-307 table IV-DV): The permit lists some facility-wide conditions in table IV-DV, but there is no way to determine what units at the facility are subject to these requirements (including NESHAP Part 61 subparts M and FF and NESHAP subparts A and CC). Please state in the permit what process units are subject to these rules.
2. If the district retains the current format for fugitives, please make Rules 8-18 and 8-28 facility-wide requirements. Most units at the refinery would be expected to be subject to these requirements. However, these rules are not included in the permit for most units.

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3. Pages 286-301: Please specify which units are subject to 40 CFR Part 60, Subpart GGG, VV, and QQQ; 40 CFR Part 61, Subpart FF; and 40 CFR Part 63, Subpart CC.

Monitoring

Vessel Depressurization Rule

We understand that the District will require monitoring of the pressure for all of the pressure vessels to determine compliance with SIP Reg 8-10.

HYDROGEN PLANT

Applicable Requirements

Hydrogen Plant #3 (unit 4160): We understand that the District's inventory estimates emissions from this unit alone at 600 tons per year. The Statement of Basis does not include any discussion of rules or emission limits that apply to this unit other than the general throughput limit discussion. Please add to the Statement of Basis a complete review of the limits that potentially apply and the specific limits that the unit must meet, including Reg 8-2 for the CO₂ vent and any other emission points that are not limited by Reg 8 or 10, and whether a scrubber or other emission controls are required (a scrubber is required in the proposed Conoco-Phillips permit). Please note that Table AM appears to have no requirements.

Please also clarify why upsets but not routine releases from this unit are covered in the Condition # 12271 POC limit of 132.0 TPY.

PERMIT SHIELDS

Non-applicability Shields (Tables IX A-3 and IX A-10)

There are several significant problems with the proposed permit shields. One type of problematic shields included in the proposed permit is facility-wide shields¹, which apply to the entire refinery and prospectively to an unknown universe of potential future new units. There are dozens of regulations listed in Table IX A-10 pertaining to benzene service, "SOCMI" units, hazardous waste incineration, and electric utility steam generators, among others. The permit does not contain any applicability determinations for these rules, nor any conditions to prevent the source from triggering these regulations.

¹ One example is that table IX A-10 on p. 540 gives a facility-wide shield from the requirements of 9-1-302, based on the facility meeting the requirements of 9-1-110. While table III (generally applicable requirements, p41) does list 9-1-110 as an applicable requirement, the sulfur limit referred to in rule 9-1-110 should be added to the "description of requirement" column.

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Another facility-wide shield included in the proposed permit consists of a very large list of sources exempted from the boiler NSPS in Table IX A-3 without a specific reason. For example, table IX A-3 on p. 537 shields several units from 40 CFR, Subpart Db. The only explanation given is that “only S4191 and S4193 are subject to Subpart Db.” This is not adequate justification for a permit shield.

The statement of basis also does not appear to give any additional information or justification for any shields. We do not believe that 40 CFR, Subpart 70 allows either of these shields.

NSPS J

1. Please remove the proposed permit shield from NSPS Subpart J for the thermal oxidizers at the Claus unit (A-1501, A-1517, and A-1518). Because these thermal oxidizers are a part of the Claus sulfur recovery plant, they are subject to NSPS J (including 60.104(a)(2)) unless the Claus plant itself is exempt. In addition, the District proposed the shield because the thermal oxidizers combust only natural gas. Since they are control devices at a sulfur plant, however, it is reasonable to expect that these units will be combusting more than natural gas.
2. Table IX A-2, p. 537: The permit shield for several units has been deleted. However, the citation to 40 CFR 60, Subpart J, 60.105 in the shield still remains. We recommend deleting this out to avoid confusion.
3. Table IX A-12 (p. 542) contains proposed shields against NSPS subpart J for flares 1471, 1472, 4201, 101, 102, and 103 based on an emergency/malfunction use only exemption in the NSPS. However, the permit (see Table VII-AO p.459) references condition #20747, but does not actually limit the units to emergency/malfunction unit. Please add emergency/malfunction language to the limit column. In addition, only flares 4201, 101, 102, and 103 are covered by condition 20747 (p.414). Please add an emergency/malfunction limit for flares 1471 and 1472 or else remove them from the permit shield on p. 542 and add the NSPS limits to the permit.
4. Table IX A-13 (p. 543) shields flares 1771 and 1772 from NSPS J with the caveat that “Not applicable only when these flares combust only process upset gases or fuel gas that is released to the flare as a result of relief valve leakage or other emergency malfunction that is exempt from the standard...” This shield is confusing and unnecessary because the regulation itself exempts the flares from the fuel H₂S limit during emergency/malfunction releases. Instead, any shield needs to be justified by *permit conditions* limiting the source to upset/malfunctions.

Wastewater Treatment

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The proposed permit contains Table IX A-8, a permit shield from Reg 8 Rule 8 sections 301, 302, 306, and 308 based on the exemptions in Rule 8-8-114. However, there is no apparent reason why section 114 would exempt these operations, and it never authorizes any exemption from sections 306 nor 308. Therefore, the proposed permit shield is not allowed under 40 CFR part 70. The District may wish to discuss in the statement of basis for the initial Title V permit whether the Reg 8 Rule 8 section 113 exemption could apply to these units and consider whether a permit shield based on section 113 could be justified in a future permit revision.

Process Drains

Table IX A-9, "Process Drains:" The Proposed Permit contains a permit shield for the process drains from Reg 8 Rule 8 based on a statement that no requirements exist. Rule 8-8 includes stormwater sewer systems, junction boxes, and sewer lines (sections 216-218). If the District wishes to provide a shield, please document that process drains are excluded from these definitions and are not covered by other sections of the rule; or document why each process drain that is covered by Rule 8-8 would not be subject to any requirements under Rule 8-8.

Steam Methane Reformer

Table IX A-11, S4161 - DC H-101 HP3: The District has proposed a permit shield based on NSPS alternate monitoring provisions that require approval by the EPA Administrator. We were not able to locate an EPA approval document in the limited amount of time available to review this permit. Please provide us with either a copy of the EPA approval document or the date and official who signed this approval or remove the shield.

SULFUR TREATMENT EMISSIONS

Applicable Requirements

Please add Rules 9-1-301, 9-1-307, and 6-305 to the applicable requirements for the Sulfur Plants or explain in the statement of basis why these rules do not apply.

Federal Enforceability

Rule 9-1-313.2 should be marked federally enforceable (see table IV-AQ, p. 155).

Monitoring

1. SCOT Unit: The monitoring conditions on p. 378, condition #12271- SO_x CEMs, total sulfur gas chromatography as BACT may be useful to evaluate for other refineries.
2. Less frequent testing based on a 50% compliance margin is proposed on p410 for SO₃/H₂SO₄ and particulate limits - see comment under combustion units/CO boilers/periodic monitoring, above.

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3. 95% H₂S limit: annual test is proposed for sulfur plants S1431, S1432, S1765, S4180 (table VII-AH, p. 455). See Tesoro comments under Sulfur Treatment Units/Monitoring (EPA letter to BAAQMD, September 26, 2003, Enclosure B, p. 10).
4. Please explain in the statement of basis the origin of the H₂S limit that changes based on % SJV crudes in table VII-AW for S1494 (p. 471), for S1504, etc (p. 474), and for utility CO boilers 1, 2, and 3 (p. 476).
5. Sources 1431, 1432, 1765, and 4180 are all subject to Rules 6-301 (visible emissions) and 6-310 and 6-311 (particulates). However, no monitoring is included for any of these rules in table VII-AH (p. 455). The statement of basis says that for sources 1431 and 1432 no monitoring for Rule 6-301 is required and refers the reader to note 5 for an explanation (see PM sources and discussion). However, there is no note 5. The District exempts sources 1765 and 4180 from Rules 6-301, 6-310, and 6-311, explaining in the Statement of Basis that these units are subject to an annual source test to determine compliance with the sulfur emissions limit of 6-330 (sulfur recovery units). Similarly, for units 1431 and 1432, the statement of basis requires annual source tests to monitor for compliance with 6-330. An annual source test for sulfur is not sufficient to monitor for compliance with visible emissions and particulate limits. Please include more frequent monitoring to determine compliance with the requirements of 6-301, 6-310, and 6-311. In addition, please explain how the district will monitor for compliance with 6-330 between annual tests.

SUPPORT FACILITIES

Source Aggregation: It appears that there may be potential support facilities at the Shell facility. For instance, the Shell Martinez Catalyst plant and Shell Chemical (SIC Code 2911) located on 10 Mococo Rd may be contiguous and/or adjacent to the refinery. The address for Landry Services is listed as the Shell Refinery, although we did not find additional information on emissions or source type in the CARB database² beyond the SIC Code (2911) to indicate whether Landry Services could be a support facility. Please inform us whether the District has evaluated potential support facilities in Standard Industrial Classification Code 2911 or other SIC Codes for the Shell Martinez refinery.

TANKS

Applicable Requirements

² http://www.arb.ca.gov/app/emsinv/facinfo/factox.php?dd=&grp=1&sort=FacilityNameA&dbyr=2001&ab_=&dis_=BA&co_=&fname_=&city_=&fzip_=&fsic_=2911&facid_=&display_1=Risk&showpol=

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Rule 8-5-311 has been deleted from the District's rules and the SIP, but is still cited throughout the permit. Please delete this citation and replace it with a citation to 8-5-306.

Monitoring

1. Rules 8-5-320, 8-5-321, and 8-5-322 are applicable requirements for several tanks. However, all monitoring for these requirements has been removed from section VII of the permit. Please add monitoring for these rules. For the appropriate monitoring requirements please refer to Tesoro tank comments (EPA letter to BAAQMD, September 26, 2003, Enclosure A, p. 11-13).
2. Table VII-Y on page 439 mistakenly refers to 328.2 as the emission limit citation. This should be 328.1.2
3. It is not clear why the monitoring requirements specified in section 8-5-402 were deleted from Table VII - P for the internal floating roof tanks on page 530. Tanks that are subject to the requirements of section 8-5-305 should be inspected per section 402. In addition, the monitoring requirements specified in this table pursuant to NSPS Subpart Kb are incomplete. The district should add the additional applicable requirements found in 60.113b.
4. Please explain why the monitoring requirements for NSPS Subpart Kb have been deleted from tables VII-X and VII-CN.
5. Source 952 should be added to the table of applicable limits and compliance monitoring requirements for the internal floating roof tanks (Table VII - P) on page 530.

THROUGHPUT LIMITS ON GRANDFATHERED UNITS

The permit appears to be missing the general discussion that is included for other permits to avoid any misunderstanding that these limits could be relied upon to avoid NSR applicability. Please add this language to the permit to clarify that these limits trigger reporting requirements and cannot be relied upon to presume that a unit is, or is not, subject to NSR (Throughput Limits section VI condition #18618 on p.402, etc).

Federal Enforceability

We understand that other throughput limits are federally enforceable limits. Are the capacities listed in condition #4303 p.314 limited to the permit limit, or can Shell exceed them based on "maximum allowable capacity?"

WASTEWATER TREATMENT
Applicable Requirements

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1. Table IV-DQ (p.291) details the applicable requirements of 40 CFR 60, Subpart QQQ for individual drain systems. Please note that the oil-water separators, including slop oil vessels, are also subject to Subpart QQQ.
2. Please verify that sludge dewatering does not occur at the facility. If this process does occur, rule 8-8-304 may apply.
3. Table IV-M, Tank 532 (p.103): Please add citations for 61.357(d)(2), (d)(6), and (d)(7). Please also add to monitoring citations in table VII for this source. Please do the same for all tanks subject to 61.357(d).
4. Table IV-DV (p.305), refinery-wide requirements: 61.357(d)(2) and (5) are included as applicable requirements. Please add 61.357(d)(6), (7), and (8) or explain why these requirements are not applicable. Also, the monitoring requirement of 61.357(d)(5) applies if the owner/operator elects to comply with 61.342(e). If 61.342(e) is the chosen option, then the applicant should demonstrate that the flow-weighted annual average water content of facility waste is $\geq 10\%$, as described in 61.342(e)(2). Facility waste with less than 10% would be subject to 61.342(c)(1).
5. In our review of the permit, we did not see any permit conditions or requirements for S1467 and S5117 (biotreaters). These units may be subject to 40 CFR Part 61, Subpart FF (e.g., 40 CFR 61.348 and/or CFR 63 Subpart CC). Please explain if these units have any applicable requirements.
6. No sewer pipelines or process drains were listed in Section II of the permit, though some may be subject to 40 CFR Part 61, Subpart FF and/or 40 CFR Part 63, Subpart CC. Please explain if these units have any applicable requirements.
7. It appears that the emissions from the LOG API Separator (S1469) and CPI Oil/Water Separator (S1779) are routed to a water scrubber and subsequently to a carbon adsorption system. If the entire system (API separator, water scrubber, and carbon adsorption system) is a closed vent system, please add a permit condition to include the requirements of 61.347(a)(1).
8. Please provide an explanation as to whether the wastewater ponds (S-1466, S-1468), wastewater separator dubbs box (S-2009), wastewater junction boxes (S-2010), wastewater collection sumps (S-2011), Final EPT 1&2 Holding Ponds 5C & 5D (S-2014), and Bioclarifiers (S-5118 & S-5119) are subject to 40 CFR 61 Subpart FF and/or 40 CFR 63 Subpart CC.
9. Please explain why there are no permit conditions regarding the carbon adsorption systems for the oil/water separators. See comment for DNF Units below.

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10. DNF Units S-2007 and S-2008: Since emissions from these units are abated by carbon adsorption systems, please include corresponding requirements for S-2007 and S-2008, per 40 CFR 61.354(d). Please also provide an explanation as to how the ppm limits in the permit will result in compliance with 40 CFR 61.354(d).
11. If the CPI Oil/Water Separator (S1779) is part of the wastewater treatment system, it may be subject to 40 CFR 61.347 and any related monitoring, recordkeeping, and reporting requirements in this Subpart FF, as well as MACT Subpart CC. Please provide a determination in the statement of basis.

Federal Enforceability

Applicable requirement 60.692-1(d) should be denoted as federally enforceable on page 291 (table IV-DQ, Subpart QQQ for individual drain systems) of the draft permit.

Monitoring

1. Benzene Waste NESHAP: Please explain the basis for 61.354(d) alternate monitoring in the statement of basis (Condition #4298 on p312). As noted in prior comments, EPA approval is necessary for NSPS alternate monitoring.
2. Tank 532: Please add monitoring citations for 61.357(d)(2), (d)(6), and (d)(7). Please do the same for all tanks subject to 61.357(d).
3. Please spell-out the recordkeeping requirements of 61.356.

GENERAL COMMENTS (MISCELLANEOUS UNITS AND STATEMENT OF BASIS)

Applicable Requirements

1. MACT Subpart UUU conditions listed on p. 414 (section VI, condition #18646) could be used as an example for other facilities.
2. Coke Handling conditions may serve as an example for other permits (p380-3, section VI, condition #12271): 8 % moisture content to limit crusher emissions; analyze once per day; and other dust-control measures.

Monitoring

1. In the PM source table (starts p. 57, electronic version, statement of basis), the District refers to note 5 to explain why several sources are not subject to PM monitoring. Note 5 is not included in the PM discussion. Please explain why all sources that refer to note 5 are not subject to PM monitoring.
2. Sources 1502, 1503, 1540, 4021, 4171, and 4161 (various units) are subject to Rules 6-301 and 6-310. However, no monitoring requirements are included in table VII, nor is any explanation given in the Statement of Basis. Please add appropriate visible

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emissions monitoring to table VII for these sources or provide an explanation in the Statement of Basis to justify why none is needed.

3. The table VII-CE (p. 501) “process swing gas” limit monitoring should be continuous, since the facility is subject to continuous monitoring of the fuel gas H₂S pursuant to NSPS Subpart J. If the facility has requested alternate monitoring under 60.13(i), please explain whether EPA has approved this request. Also, please explain how record keeping would demonstrate compliance with the Flexigas H₂S limit when fuel gas is continuously monitored for H₂S.